

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,  
and listings, of claims in the application:

LISTING OF CLAIMS:

1-20. (cancelled)

21. (currently amended): A method for preparing monodisperse biodegradable microspheres comprising the steps of:

- a) preparing [[an]] a single emulsion comprising at least one organic phase, which comprises [[an]] a pharmaceutically active ingredient and a biodegradable polymer dissolved in an organic solvent, and at least one aqueous phase, the viscosity of the organic phase and the aqueous phase having a ratio of from 0.1 to 10;
- b) subjecting the emulsion obtained to controlled laminar shearing;
- c) removing the solvent from the organic phase; and
- d) isolating the microspheres so obtained.

22. (currently amended): The method of claim 21, wherein ~~the majority of~~ the microspheres are constituted in majority by the biodegradable polymer.

23. (previously presented): The method of claim 22, wherein the biodegradable polymer is selected from poly( $\alpha$ -hydroxy) acids, the aliphatic polyesters of poly( $\alpha$ -hydroxy acids), of poly( $\epsilon$ -caprolactones)-PCL, of polydioxanones - PDO, polyorthoesters, polyanhydrides, polycyanoacrylates, polyurethanes, polypeptides or poly(amino acids), modified polysaccharides, cellulose, polycarbonates, polydimethylsiloxanes and poly(vinyl acetates) and their derivatives and copolymers.

24. (previously presented): The method of claim 22, wherein the biodegradable polymer is selected from polylactic acids (PLA), and the copolymers of polylactic acid / polyglycolic acid (PLGA).

25. (previously presented): The method of claim 21, wherein the biodegradable polymer has a molecular weight of from 50 to 500 kDaltons.

26. (previously presented): The method of claim 21, wherein the organic solvent of the organic phase of the emulsion is ethyl acetate.

27. (currently amended): The method of claim 21, wherein the pharmaceutically active ingredient is lipid-soluble.

28. (currently amended): The method of claim 21,  
wherein the pharmaceutically active ingredient is water-soluble.

29. (currently amended): The method of claim 21,  
wherein the pharmaceutically active ingredient is a peptide or a  
protein.

30. (currently amended): The method of claim 21,  
wherein the emulsion prepared in step (a) comprises a  
pharmaceutically hydrophilic active ingredient in combination  
with a pharmaceutically lipophilic active ingredient.

31. (previously presented): The method of claim 21,  
wherein the organic phase of the emulsion represents from 10 to  
60% by weight relative to the total weight of the emulsion.

32. (currently amended): The method of claim 21,  
wherein the organic phase of the emulsion comprises from 1 to 50%  
by weight of the polymer.

33. (currently amended): The method of claim 21,  
wherein the organic phase of the emulsion comprises from 1 to 50%  
by weight of the pharmaceutically active ingredient.

34. (cancelled)

35. (currently amended): The method of claim 21, wherein the ~~external and/or internal~~ aqueous phase of the emulsion contains at least one stabilizing agent and/or at least one viscosity agent.

36. (currently amended): The method of claim 21, wherein the ~~external and/or internal~~ aqueous phase of the emulsion contains at least one stabilizing agent and/or at least one osmolarity agent and/or at least one surfactant and/or at least one buffer agent.

37. (currently amended): The method of claim 21, wherein the step of ~~calibration by controlled~~ laminar shearing is carried out in a Couette device.

38. (previously presented): The method of claim 21, wherein the step of removing the solvent from the organic phase is carried out by extraction in water.

39. (cancelled)

40. (currently amended): The method of claim [[39]] 21, wherein the pharmaceutically active ingredient is selected from antibiotics, hypolipidaemics, antihypertensives, antiviral

agents, beta blockers, bronchodilators, cytostatics, psychotropic agents, hormones, vasodilators, anti-allergics, analgesics, antipyretics, antispasmodics, anti-inflammatories, anti-angiogenics, antibacterials, anti-ulcerants, antifungals, anti-parasitics, antidiabetics, anti-epileptics, anti-Parkinsons, antimigraines, anti-Alzheimers, anti-acneics, antiglaucomic agents, anti-asthmatics, neuroleptics, antidepressants, anxiolytics, hypnotics, normothymics, sedatives, psychostimulants, anti-osteoporosis agents, anti-arthritis, anticoagulants, antipsoriasis agents, hyperglycaemics, orexigenics, anorexigenics, anti-asthenics, anticonstipation agents, antidiarrhoeals, anti-trauma agents, diuretics, myorelaxants, enuresis medicaments, erection disorder medicaments, vitamins, peptides, proteins, anticancer agents, nucleic acids, RNA, oligonucleotides, ribozymes and DNA.